WHAT IS CLAIMED IS:

1. A method of creating dot data representing recording states of ink dots in order to perform color printing by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the method comprising the steps of:

(a) providing a print head that includes a plurality of nozzle groups for ejecting plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels;

(b) storing color image data for an area corresponding to a height of entire nozzles in the sub scanning direction that are used during color printing into a first buffer;

(c) selecting color image data that represent a color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

(d) performing at least a halftone process that uses a threshold pattern having a printing resolution on the selected color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

(e) outputting the dot data from the second buffer.

2. A method according to claim 1, wherein the color image data have a lower resolution than the printing resolution.

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3. A method according to claim 1, wherein

the color image data stored into the first buffer are expressed in a first color system that uses three color components to express any colors, and

the step (d) includes converting from the first color system to a second color system that uses the plural types of inks to express any colors prior to the halftone process.

4. A method according to claim 1, wherein

when print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the step (d) includes replacing values of dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.

5. A print control device for creating dot data representing recording states of ink dots in order to perform color printing by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the print head having a plurality of nozzle groups for ejecting plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels, the print control device comprising:

a first processor for storing color image data for an area corresponding to a height of entire nozzles in the sub scanning direction that are used during color printing into a first buffer;

a second processor for selecting color image data that represent a

color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

a third processor for performing at least a halftone process that uses a threshold pattern having a printing resolution on the selected color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

a fourth processor for outputting the dot data from the second buffer.

6. A print control device according to claim 5, wherein the color image data have a lower resolution than the printing resolution.

7. A print control device according to claim 5, wherein the color image data stored into the first buffer are expressed in a first color system that uses three color components to express any colors, and

the third processor performs conversion from the first color system to a second color system that uses the plural types of inks to express any colors prior to the halftone process.

8. A print control device according to claim 5, wherein when print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the third processor performs replacing values of

dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.

9. A computer program product for creating dot data representing recording states of ink dots in order to perform color printing by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the print head having a plurality of nozzle groups for ejecting plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels,, the computer program product comprising:

a computer readable medium; and

a computer program stored on the computer readable medium, the computer program causing a computer to implement the functions of:

(a) storing color image data for an area corresponding to a height of entire nozzles in the sub scanning direction that are used during color printing into a first buffer;

(b) selecting color image data that represent a color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

(c) performing at least a halftone process that uses a threshold pattern having a printing resolution on the selected color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

(d) outputting the dot data from the second buffer.

10. A computer program product according to claim 9, wherein

the color image data have a lower resolution than the printing resolution.

11. A computer program product according to claim 9, wherein

the color image data stored into the first buffer are expressed in a first color system that uses three color components to express any colors, and

the function (d) includes converting from the first color system to a second color system that uses the plural types of inks to express any colors prior to the halftone process.

12. A computer program product according to claim 9, wherein

when print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the function (d) includes replacing values of dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.